

WHAT IS CLAIMED IS:

1. A method for reporting channel quality information by a subscriber station in a mobile communication system, comprising:

5 (a) receiving uplink radio resource allocation information to which a dedicated feedback channel for reporting the channel quality information (CQI) is allocated from a base station;

(b) receiving a CQI report message from the base station;

(c) measuring a radio channel quality for communication with the base station, and generating channel quality information;

10 (d) generating a CQI response message including the channel quality information; and

(e) transmitting the CQI response message to the base station through a dedicated feedback channel in the uplink.

15 2. The method of claim 1, wherein the CQI report message is broadcast.

3. The method of claim 2, wherein the CQI report message includes identifiers of at least one subscriber station arranged in a predetermined order.

4. The method of claim 3, wherein (e) comprises:

20 checking the order of identifiers of corresponding subscriber stations arranged in the CQI report message;

identifying a radio resource allocated to the subscriber station in the order of the CQI report requested to each subscriber station; and

transmitting a CQI response message to the base station through the identified radio resource in the dedicated feedback channel.

5. The method of claim 3, wherein the identifier of the subscriber station is a connection identifier (CID).

5 6. The method of claim 1, wherein the CQI response message further includes a cyclic redundancy check (CRC) in addition to the channel quality information.

7. The method of claim 1, wherein the CQI response message includes a channel quality information codeword.

10 8. The method of claim 1, wherein the CQI report message includes format information for reporting the channel quality information.

9. A method for requesting channel quality information from subscriber stations in a mobile communication system, comprising:

15 (a) allocating a dedicated feedback channel for a channel quality report to an uplink radio resource;

(b) transmitting uplink radio resource allocation information to the subscriber stations so that the subscriber stations may report CQI through the dedicated feedback channel;

(c) generating a CQI report message; and

20 (d) transmitting the CQI report message to the subscriber stations to request a CQI report from the subscriber stations.

10. The method of claim 9, wherein (c) comprises generating a CQI report message including identifiers of at least one subscriber

station, and

(d) comprises broadcasting the CQI report message to at least one subscriber station to request a CQI report from the subscriber stations.

5 11. The method of claim 10, wherein (c) comprises arranging the identifiers of the subscriber stations in a predetermined order and generating the CQI report message.

10 12. The method of claim 9, further comprising: allocating downlink radio resources for the subscriber stations according to CQI response messages provided by the subscriber stations through the dedicated feedback channel.

15 13. A method for requesting and reporting radio channel quality information in a mobile communication system to which a base station and subscriber stations are coupled through a mobile communication network, comprising:

(a) allowing the base station to allocate a dedicated feedback channel for channel quality report, and transmitting the allocation information to the subscriber stations;

20 (b) generating a CQI report message, broadcasting the CQI report message, and requesting a CQI report from at least one subscriber station;

(c) allowing the subscriber stations to receive the CQI report message, measure radio channel quality for communication link to the

base station, and generate channel quality information; and

(d) allowing the subscriber station to generate a CQI response message including channel quality information and transmit the CQI response message to the base station through a dedicated feedback channel for channel quality report.

14. The method of claim 13, wherein the CQI response message includes identifiers of at least one subscriber station arranged in a predetermined order, and

(d) comprises:

checking the order of identifiers of corresponding subscriber stations arranged in the CQI response message;

identifying a radio resource position allocated to the subscriber station in the order of the CQI report requested to each subscriber station; and

transmitting the CQI response message to the base station through the identified radio resource in the dedicated feedback channel.

15. The method of claim 13, wherein the requesting and reporting method is applied to the wireless portable Internet system.

16. A base station for requesting channel information in a mobile communication system, comprising:

a base station resource controller for generating uplink radio resource allocation information in which a dedicated feedback channel for CQI report is allocated to an uplink radio resource, and including a

channel information requester for generating a CQI report message;

a digital signal transmitter for performing adaptive modulation and coding on the uplink radio resource allocation information and the CQI report message to generate digital signals; and

5 an analog signal transmitter for converting the digital signals into analog signals and transmitting the analog signals to the subscriber stations,

wherein the base station resource controller transmits the uplink radio resource allocation information to the subscriber station and
10 transmits the CQI report message thereto.

17. The base station of claim 16, wherein the channel information requester comprises:

a dedicated channel allocator for generating an uplink radio resource allocation information in which a dedicated feedback channel
15 for CQI report is allocated to an uplink radio resource;

a subscriber station designator for designating at least one subscriber station for requesting channel information; and

a request message generator for generating a CQI report message including identifiers of the designated subscriber stations.

20 18. A subscriber station for reporting channel quality information in a mobile communication system, comprising:

a message parser for receiving a CQI report message from a base station and parsing the CQI report message;

a channel quality measurer for measuring a radio channel quality of the communication link to the base station, and generating channel quality information;

5 a response message generator for generating a CQI response message including the channel quality information;

a resource allocation checker for receiving uplink radio resource allocation information with a dedicated feedback channel for CQI report provided by the base station, storing the uplink radio resource allocation information, and checking an allocated radio resource for CQI report according to the parsed message result; and

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a transmitter for transmitting the CQI response message to the base station through the allocated radio resource.

19. The subscriber station of claim 18, wherein the CQI report message includes identifiers of at least one subscriber station arranged in an order corresponding , and

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the resource allocation checker checks a radio resource position at which the subscriber station reports channel quality information through the dedicated feedback channel according to the order of identifiers of the corresponding subscriber stations arranged in the CQI report message.

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